Japan: Broadband Market Update

Rika Saito
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Summary

Optic fiber dominates Japan's broadband market. According to a June 2008 survey by the Japanese Ministry of Internal Affairs and Communications (MIC), the number of fiber-to-the home (FTTH) subscribers has surpassed the number of DSL subscribers for the first time. Also, NTT started NGN (Next Generation Network) service in March 2008, which will lead to Fixed-Mobile convergence (FMC) service. Adding to fixed broadband, wireless broadband is emerging. Next generation broadband wireless communication service using 2.5GHz band will start in 2009.

Market Demand

Major trends in Japan's telecommunications industry in 2008 were: (1) rapid penetration of FTTH, (2) start of NGN service, and (3) development of FMC.

1. Fiber-to-the-Home (FTTH)
   According to the Ministry of Internal Affairs and Communications (MIC) announcement in June 2008, the number of FTTH subscribers (13.1 million) surpassed the number of DSL subscribers (12.3 million) for the first time (see next section "Market Data" for the trend in subscriber numbers). Total broadband service subscriber number is 29.3 million, an 8% increase from the previous year.

2. Next Generation Network (NGN)
   General description of NGN is that one network transports all information and services (voice, data, and all sorts of media such as video). NGNs are commonly built around the Internet Protocol (IP), and "all-IP" is also used to describe the transformation towards NGN. NGN is also the necessary network service to realize Fixed-Mobile Convergence (FMC) which will be discussed next. Nippon Telegraph and Telephone (NTT), Japan's largest telecommunication service provider, started NGN service in March 2008. See Table 1 for NTT's NGN investment and Table 2 for NGN subscriber number estimate.

   Table 1. NTT's NGN investment

   (M USD)

	2006	2007	2008
NTT East	101	151	606
NTT West	51	151	555
Total	152	302	1161

(source: MCA)

Table 2. NGN subscribers estimate

	2008	2010	2012
NGN	830,000	7.22 million	16.84 million

(source: Seed Planning)

3. Fixed-Mobile Convergence (FMC)

According to the definition by SearchMobileComputing.com, FMC is "the trend towards seamless connectivity between fixed and wireless telecommunications networks. The term also describes any physical network that allows cellular telephone sets to function smoothly with the fixed network infrastructure. The ultimate goal of FMC is to optimize transmission of all data, voice and video communications to and among end users, no matter what their locations or devices. In the more immediate future, FMC means that a single device can connect through and be switched between wired and wireless networks".

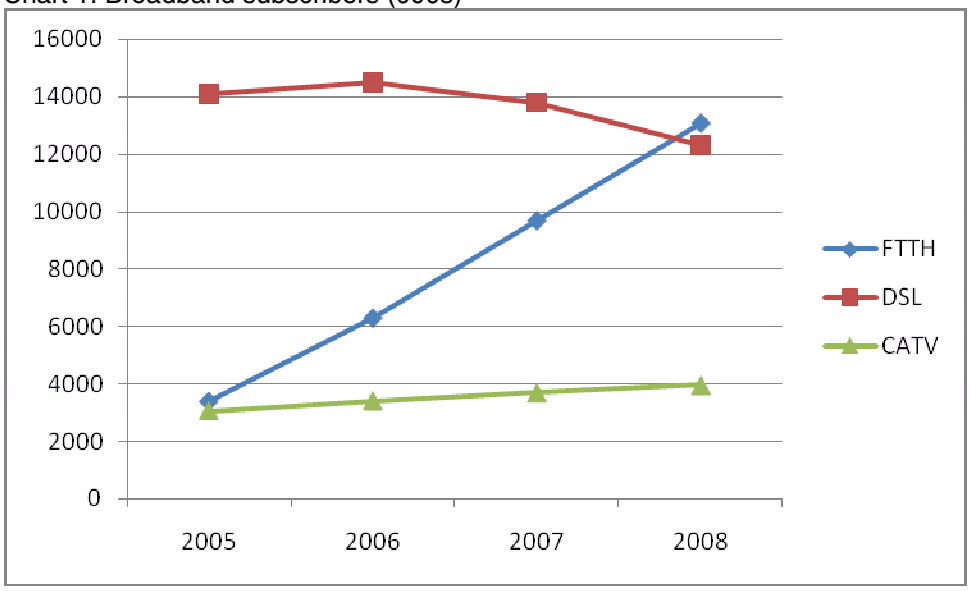
Behind the rise of FMC, there is the saturation of the mobile phone market and the decline of the fixed line market. Both mobile and fixed phone service providers are seeking new market development. Commercial introduction for FMC service is expected to start around 2010 - 2012.

As for wireless broadband, MIC authorized Wireless Broadband Kikaku (currently UQ Communications) and Willcom for 2.5GHz band in 2007. Both companies are planning to start service in 2009.

Market Data

The chart below shows subscriber trends among broadband services.

Chart 1. Broadband subscribers (000s)



Source: Ministry of Internal Affairs and Communications

Best Prospects

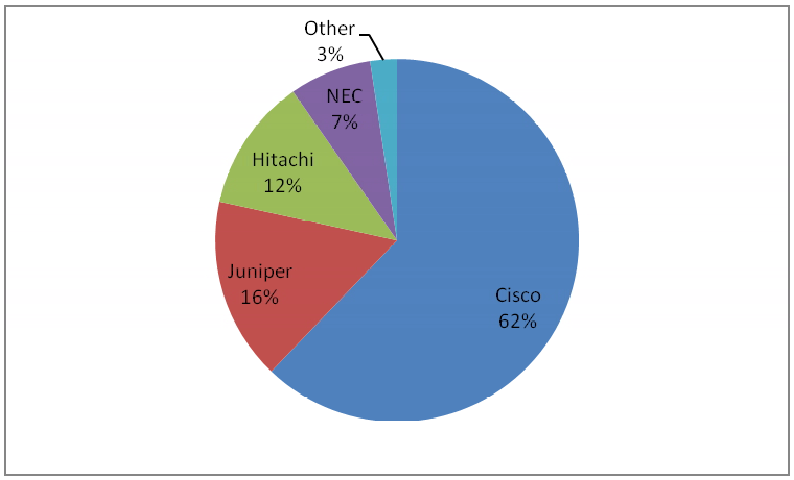
MCA, a Japanese research company, predicts that the emergence of NGN will increase the demand for IP related equipment such as high end routers and switches. MCA predicts the market size for routers/switches will grow to 1.4 billion USD by 2010.

As noted before, MIC gave wireless broadband licenses for 2.5 GHz band to two service providers, UQ Communications (WiMax) and Willcom (next generation PHS) in 2007. Both firms are planning to start next generation broadband wireless communication service in 2009. According to Nomura Research Institute, the size of wireless broadband market will grow to 2.5 billion USD by 2012 from 143 million USD in 2007. The market may grow rapidly if this service is adopted by other terminal devices such as car navigation system, portable game machine or portable audio equipment.

Key Suppliers

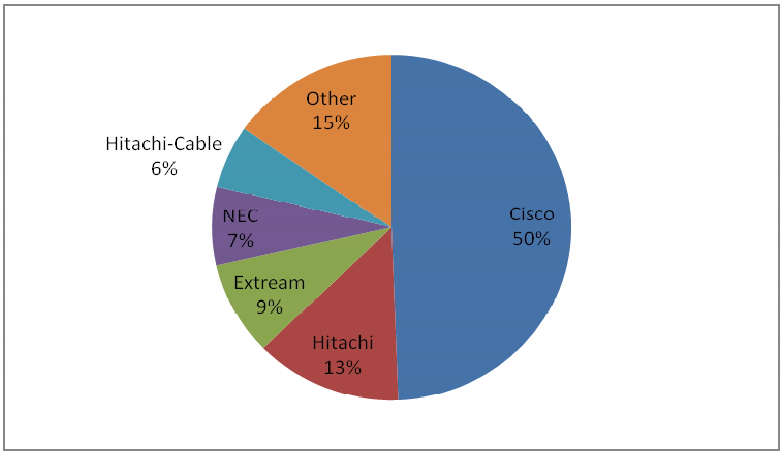
U.S. manufacturers have competitive advantages in IP network technologies. Actually, Cisco has a major share in Japan's IP related equipment market, about 50% of the total market according to the survey from MCA (Charts 2 & 3). For routers, Juniper, Hitachi and NEC are following Cisco. For switches, Hitachi, Extream and NEC are following Cisco.

Chart 2. Router Share in 2006



Source: MCA

Chart 3. Switch Share in 2006



Source: MCA

Prospective Buyers

In Japan, there are three mega-carrier telecom groups, NTT, KDDI and Softbank. Willcom is a PHS* service provider and EMOBILE is a new carrier started in 2007 (Table 3). NTT is taking the leadership in providing Japan's NGN services. UQ communications discussed above is a KDDI affiliated company.

*PHS (Personal Handy Phone System) is a low-powered wireless phone technology developed in Japan and rather different from other cellular phone technologies. PHS has been deployed in Japan since mid-1990's.Today PHS is considered as a low-cost data communication service rather than a voice service in Japan.

Table 3. Japanese Telecom Service Carriers

	Fixed	Mobile
NTT Group	NTT East	NTT DoCoMo
	NTT West	
	NTT Com	
KDDI Group	KDDI	au
Softbank Group	SB Telecom	SB Mobile
		Willcom
		EMOBILE

Market Entry

The Japanese telecom network equipment market is very competitive and telecommunications providers and system integrators prefer working with well-established brand name products.

There are three basic ways to enter the market: (1) find distributors - most telecom equipment suppliers prefer working through local distributors since local support and language are their main concerns apart from product functionality. Distributors may operate on an exclusive basis or carry several companies. (2) establish cooperative arrangements or joint ventures – a company can partner with other telecom equipment vendors who already have a strong presence in Japan. (3) participate in trade shows – demonstrating products/services to appropriate local agents is an effective way to network with local industry.

Market Issues & Obstacles

NTT will be using only optic fiber for their NGN access network. NTT has an over 70% share of optic fiber lines. To maintain fair competition, MIC established working groups in 2007 to discuss connection rules to NTT and a policy report was submitted in March 2008. MIC is currently working on modification of the regulations based on this report.

Traditional trade barriers, such as tariffs, are almost non-existent for telecom equipment. A number of major telecom equipment suppliers, both foreign and local, already have a well-established presence in Japan. In the Japanese market, service providers' requirements for product functionality and quality management are quite high.

Regarding regulations, Japan has two regulations for telecom equipment technical standards: (1) the Telecommunications Business Law (TBL); and (2) the Radio Law. The TBL is designed to ensure reliable and stable telecommunications services and covers the equipment owned by telecom carriers and terminal equipment to be connected with the line facilities owned by carriers. The Radio Law is designed to ensure fair and efficient utilization of radio frequencies and covers wireless equipment. Telecom carriers need to certify their compliance with the technical standards required by the TBL for their equipment.

Major certification institutions in Japan are:

- Japan Approvals Institute for Telecom Equipment (JATE)
http://www.jate.or.jp/english/index.html

- Telecom Engineering Center (TELEC)
http://www.telec.or.jp/eng/Index_e.htm

Trade Events

Interop
Date: June 8-12, 2009
Venue: Makuhari Messe (Chiba prefecture)
Organizer: CMP Technology
Exhibition website: http://www.interop.jp/english/index.html

Fiber Optics Expo
Date: January 21-23, 2009
Venue: Tokyo Big Site
Organizer: Reed Exhibitions
Exhibition website: http://www.foe.jp/english

Wireless Japan
Date: July, 2009 (to be confirmed)
Venue: Tokyo Big Site (to be confirmed)

Organizer: Ric Telecom
Exhibition website: http://www8.ric.co.jp/expo/wj/en/index.html

CEATEC
Date: October 6-10, 2009
Venue: Makuhari Messe (Chiba prefecture)
Organizer: Japan Electronics Show Association
Exhibition website: http://www.ceatec.com/2008/en/index.html

Resources & Contacts

Ministry of Internal Affairs and Communications (MIC)
http://www.soumu.go.jp/english/index.html

Japan External Trade Organization (JETRO)
JETRO is an independent administrative agency that provides information and support to foreign companies entering the Japanese market. The organization has six offices in the United States.
http://www.jetro.org

For More Information

The U.S. Commercial Service in Tokyo, Japan can be contacted via e-mail at: Tokyo.Office.Box@mail.doc.gov; Phone: +81 3 3224 5060; Fax: +81 3 3589 4235; or visit our website: http://www.csjapan.doc.gov

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